



# Results of the white-naped crane project funded by NEASPEC in Mongolia



БАЙГАЛЬ ОРЧИН,  
АЯЛАЛ ЖУУЛЧЛАЛЫН  
ЯАМ



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# IUCN Red List: Vulnerable

1996 Meine and Archibald: 5,500-6,500

2012 Wetlands International: 6,200-6,500

Current estimate: 7,000-7,800



# CITES Status

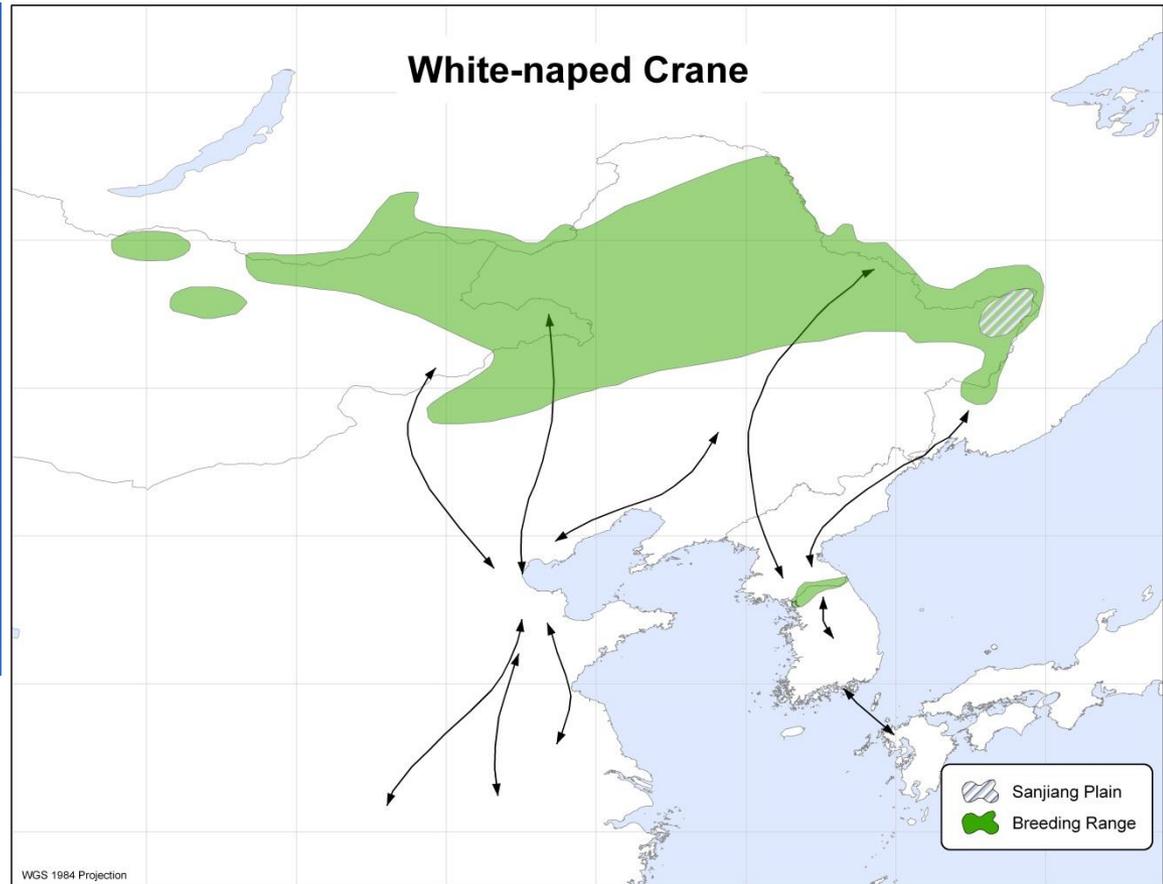
## Potential to downlist from Vulnerable to Near Threatened

- Severe decline of western population
- Lack of security for eastern population
- Need to monitor numbers, trends, and crossovers
- Identify problems on migrations, breeding, and wintering areas

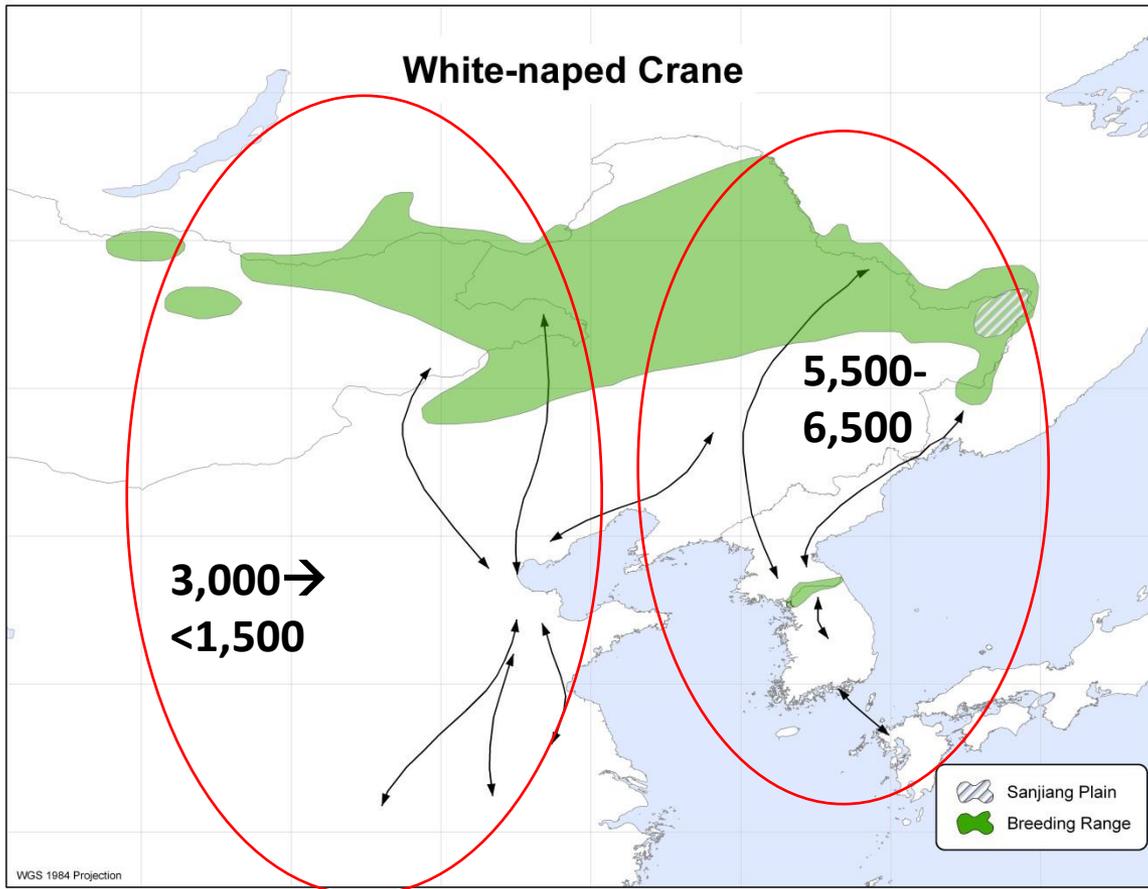


# White-naped Crane

## - Two Flyways



# White-naped Crane – Western and Eastern Populations



Make counting is difficult

Wintering birds shift between the Korean Demilitarized Zone (DMZ) and Izumi in Japan

Counts at Poyang suggest the western population is declining by 50% or more in 10-15 years

Need to understand

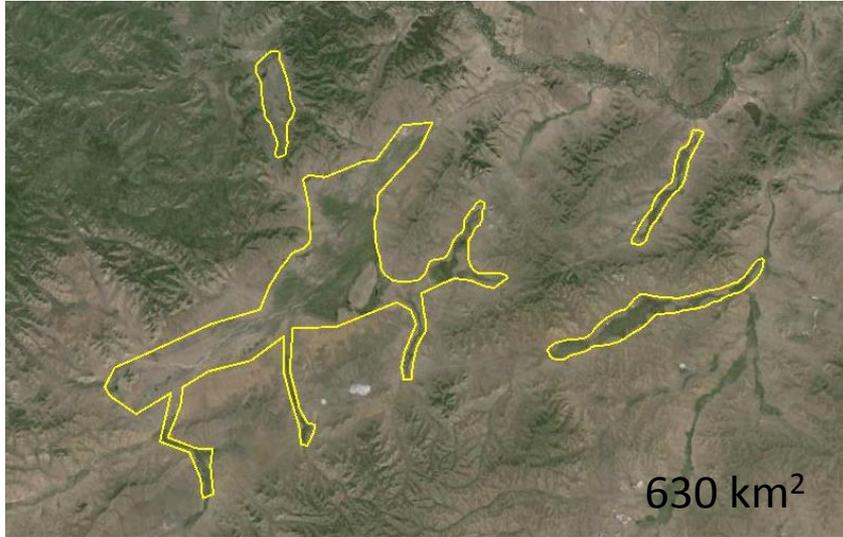
- Why?
- Where?

# Mongolia is the key country for White-naped Cranes in East Asia



# Project area - Valleys of Khurkh and Khuiten Rivers

## “The crane capital of Mongolia”



The site is very important because:

- 5 species regularly observed
- 3 species breed
- Major staging area
- Best site for WNCs
- Siberian cranes increasing
- Lots of waterbirds

The area has been designated as

- Ramsar Site
- Important Bird Area (MN033)
- East Asia Flyway Network Site
- North East Asian Crane Network Sites

However, it is not officially state protected area.



# Mongolian White-naped crane project



Education and public awareness



Fund raising trips



Research camp



International cooperation



Ecological research

# Main collaborators

## In Mongolia:

Ministry of Environment and Tourism  
WSSC of Mongolia  
Mongolian Academy of Sciences  
International Crane Foundation  
US Forest Service



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## In China:

Poyang Lake Nature Reserve  
Beijing Forestry University  
International Crane Foundation



## Other collaborators:

NEASPEC  
WWF Mongolia  
Daursky State Nature Reserve, Russia  
Crane Conservation Germany  
Korean Institute of Environmental Ecology, ROK  
IUCN Crane Specialists Group  
Crane Working Group of Eurasia



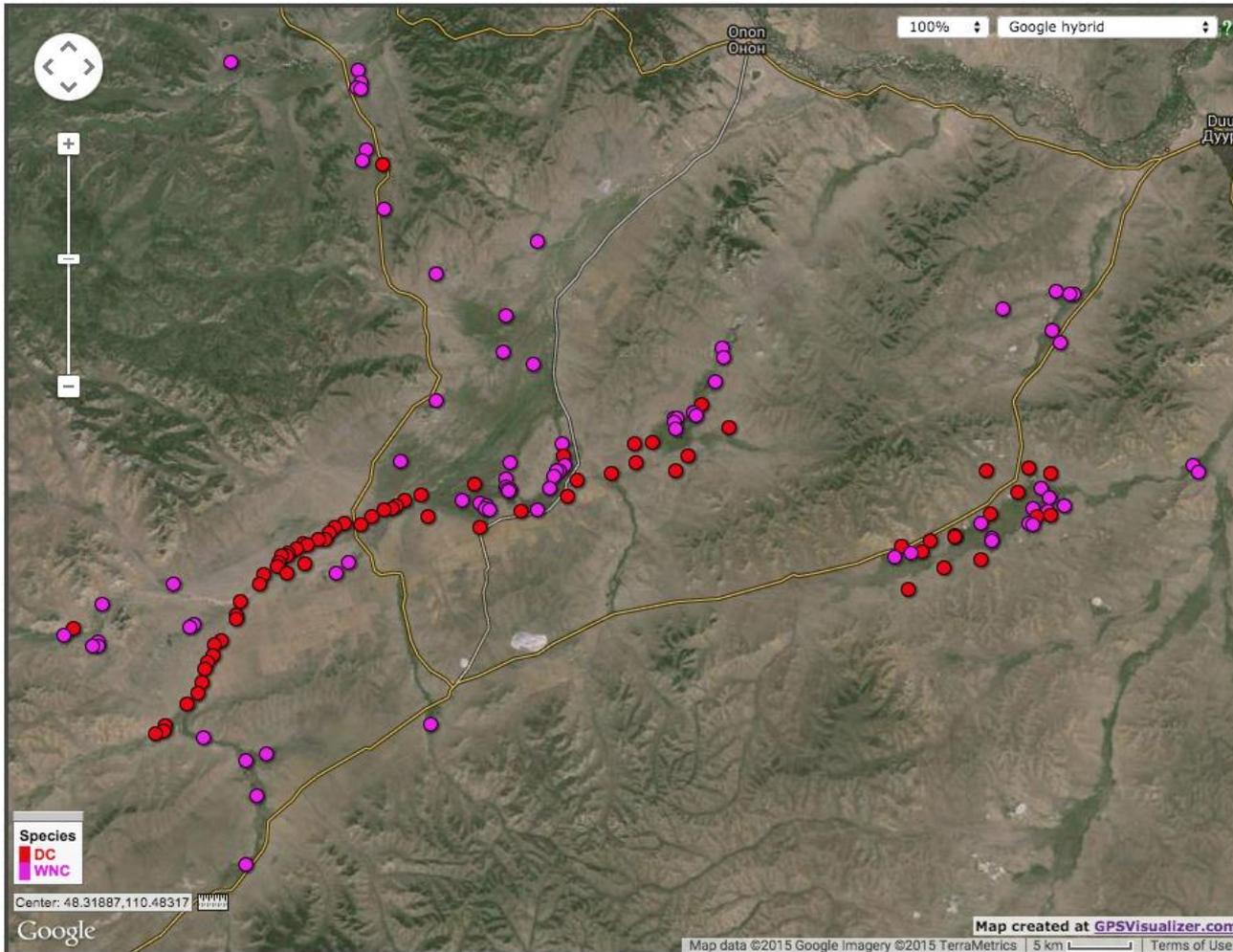
# Project activities

## Main activities

- 1. Nest surveys and monitoring**
- 2. Satellite tracking**
- 3. Color banding**
- 4. Habitat assessment**
- 5. Strengthen research capacity**
- 6. Enhance international collaboration**

# Nest surveys and monitoring

KKRV supports one of the highest density of breeding WNC and DC pairs

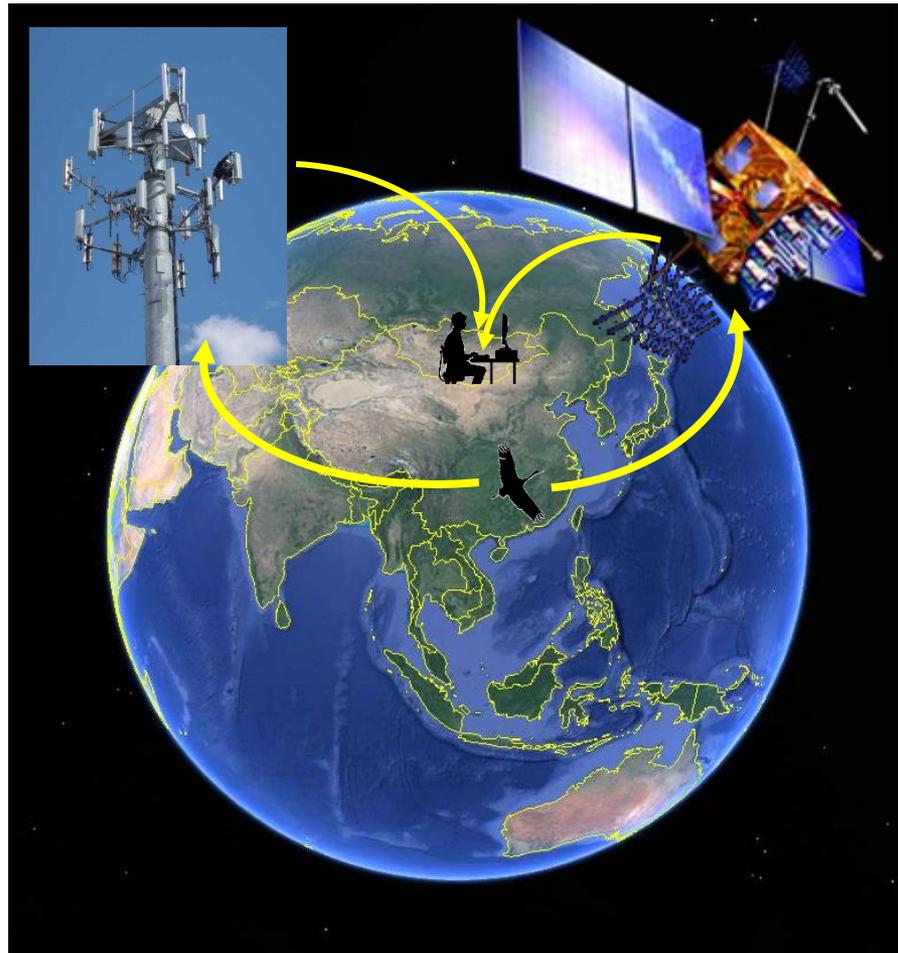


82 WNC

+ 70 DC

# Tracking crane movement with new technologies

Totally 20 birds were marked with tracking devices (13 GSM and 6 Argos system)



# Tracking crane movement with new technologies

Totally 20 birds were marked with tracking devices (14 GSM and 6 Argos)

GSM network



Manufacturer:  
Cellular Tracking  
Technologies, USA  
Weight: 60g  
Attach method: Leg  
mount



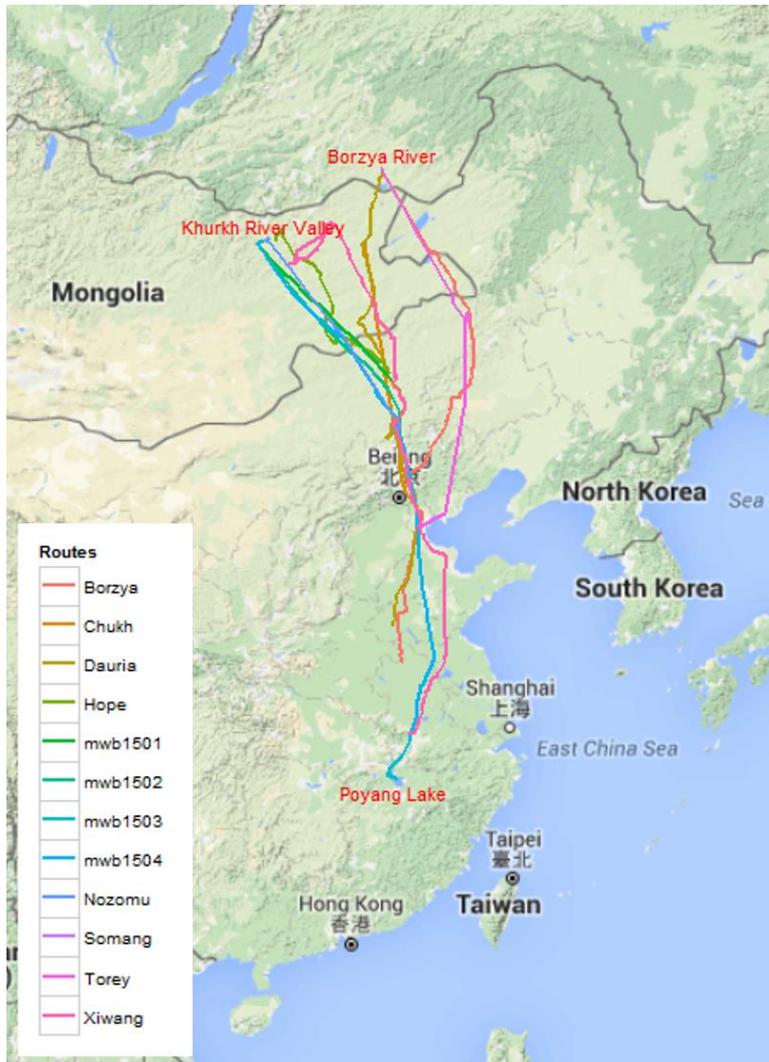
Manufacturer:  
KoEco Inc. , South Korea  
Weight: 45g  
Attach method: Backpack

Argos satellite  
system



Manufacturer: NorthStar  
Technology, USA  
Weight: 45g  
Attach method: Leg  
mount

# Key stopover sites

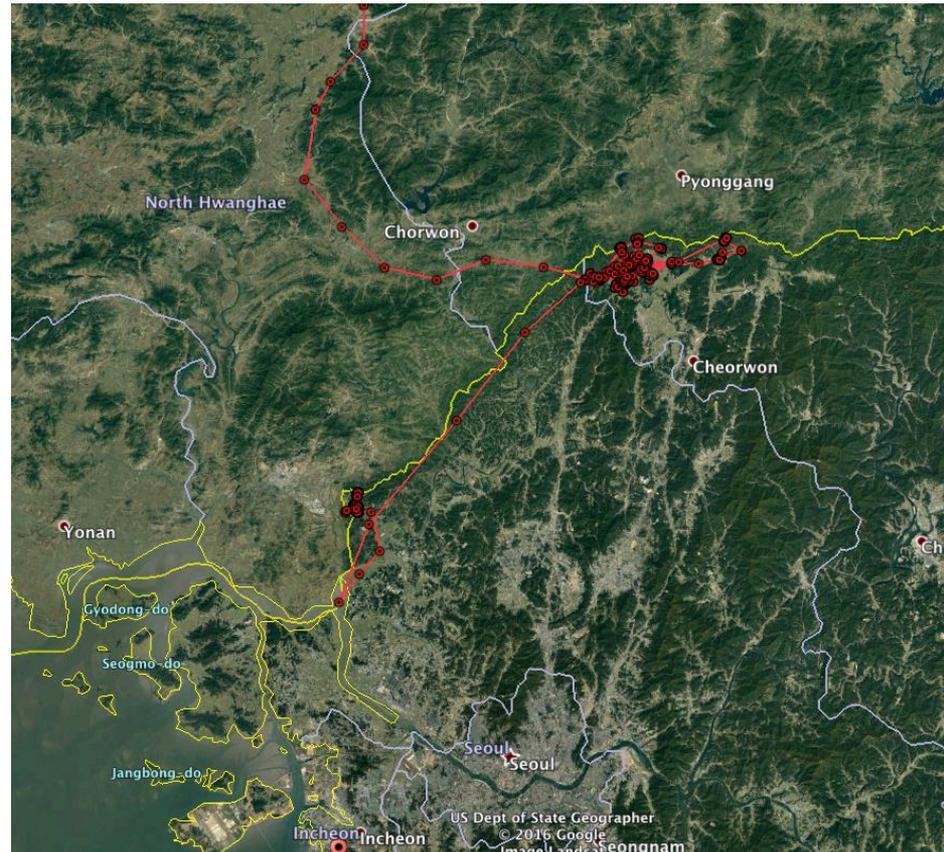


1. Ganga Nuur – Several small lakes in Dariganga county
2. Duolun – An agriculture and grassland area near Duolun County
3. Miyun Reservoir - There are several large corn fields in the northern and northeastern parts of the reservoir
4. Cangzhou/Beidagang – These adjoining areas are in both Tianjin City and Hebei Provinces along Bohai Bay, with a landscape of mixed agricultural fields and wetlands.
5. Yellow River Delta National Nature Reserve –This site includes wetlands and farmlands along the east coast.

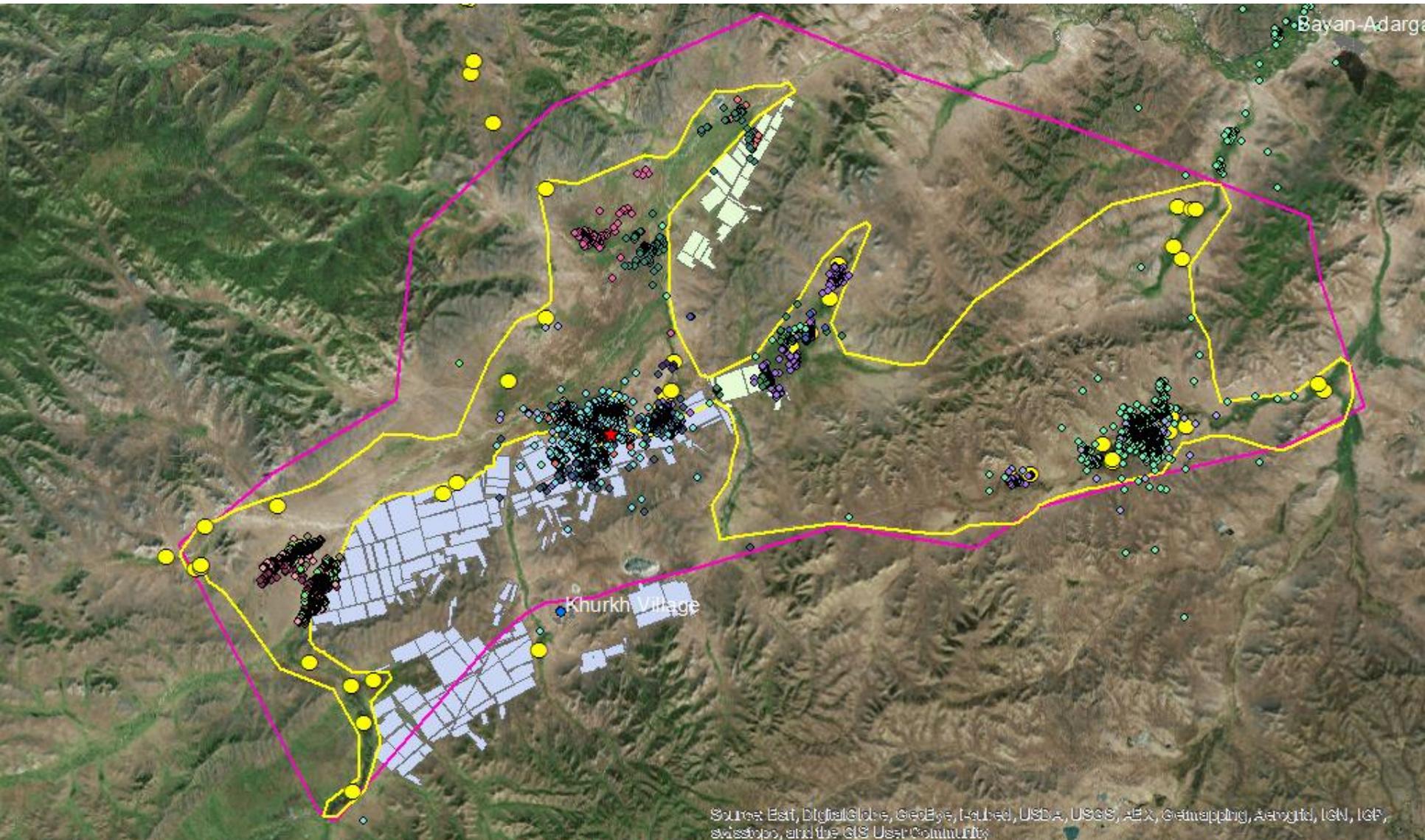
# Flyway change



One WNC marked at Borzya River in Russia in August 2015 changed its wintering ground on the second year



# Local movement and habitat use at breeding ground

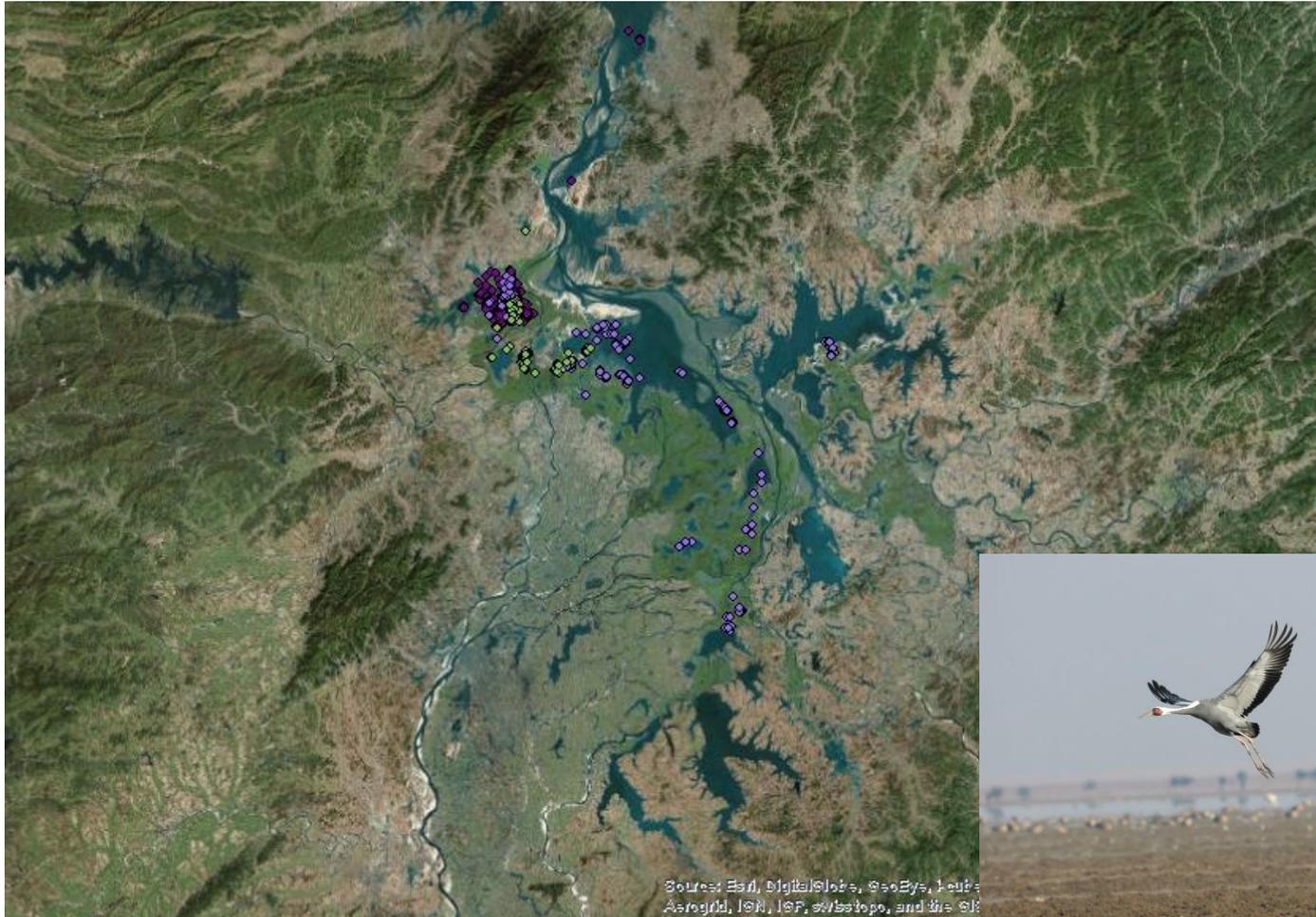


# Migration

## WNC capture and mark site in Dauria, Russia



# Local movement and habitat use at wintering ground



# NEASPEC project activities in Mongolia

- A. To organize scoping surveys and joint study to better understand populations and their habitats and share them within and beyond the Project participants
- B. Increase capacity of key local stakeholders including researchers and habitat managers
- C. Raise awareness of migratory birds and habitat conservation among local community and authorities
- D. Increase subregional dialogue and cooperation for joint actions and future opportunities

## A. Scoping surveys and joint study

### At local level

- We continued the White-naped Crane population monitoring at the Khurkh and Khuiten River Valleys
- Nesting pairs were highly dependent on wetlands and lakes in riparian habitats.
- Nest sites were abundant with tall grass providing cover for incubating cranes and inaccessibility to ground predators.
- It is important to maintain adequate water balance in the nesting areas to support the growth of tall grass.

# Livestock exclosures for habitat management



# Impact of livestock grazing on wetlands



Drone image July 2016

## B. Scoping survey

### Subregional level

- A scoping survey was carried out to identify critical sites for pre-migration congregation of White-naped Cranes in entire eastern Mongolia.
- Such large scale coordinated survey was never before conducted in Mongolia.
- The survey was conducted from 13th September to 7<sup>th</sup> October 2014.
- Two teams were deployed following two major routes for two weeks.
- The survey covered approximately over 80% of potential crane habitats in eastern Mongolia.

Survey in eastern Mongolia,  
September 2014



Survey in Daursky steppe,  
August 2015



# Scoping survey results

Five species of cranes recorded during the scoping survey:

- White-naped Crane

- Eurasian Crane

- Hooded Crane

- Demoiselle Crane

- Red-crowned Crane (only 1 family)

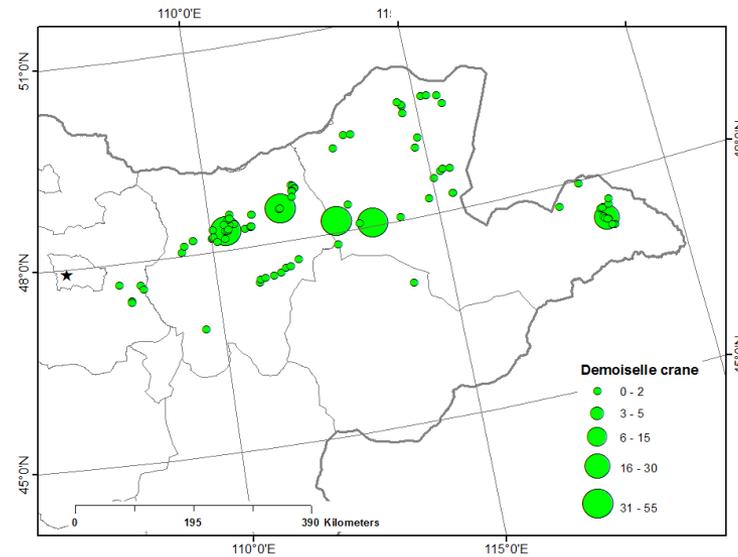
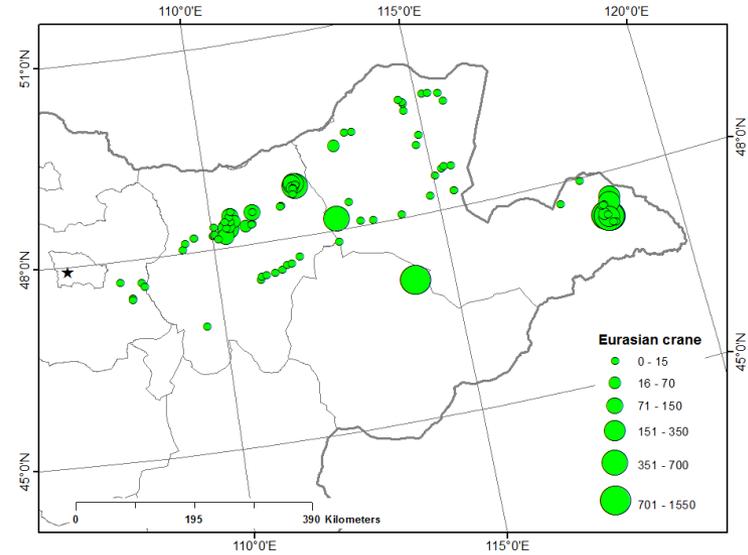
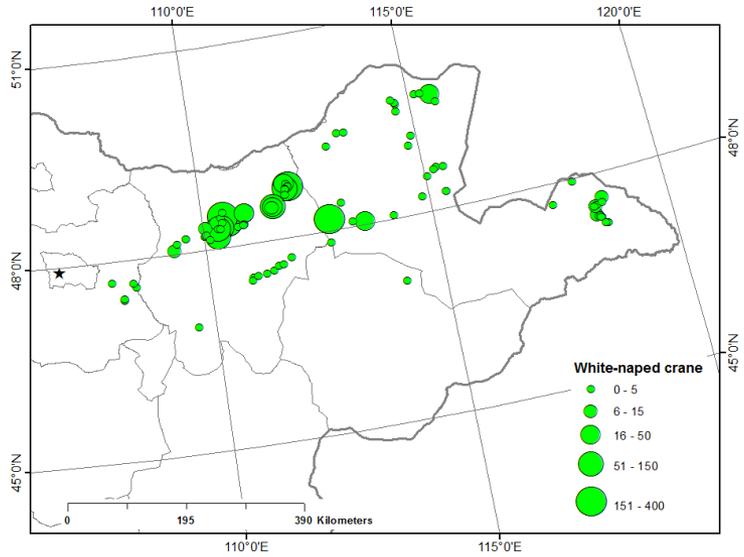
A total of 1790 WNCs were recorded at 41 sites

- 6964 Eurasian Cranes at 28 sites

- 104 Hooded Cranes at 12 sites

- 202 Demoiselle Cranes at 6 sites (most gone)

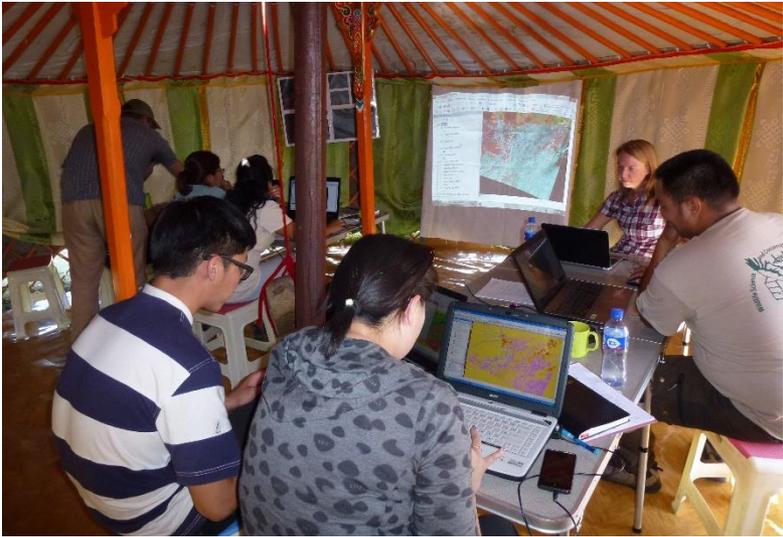
# Scoping survey results



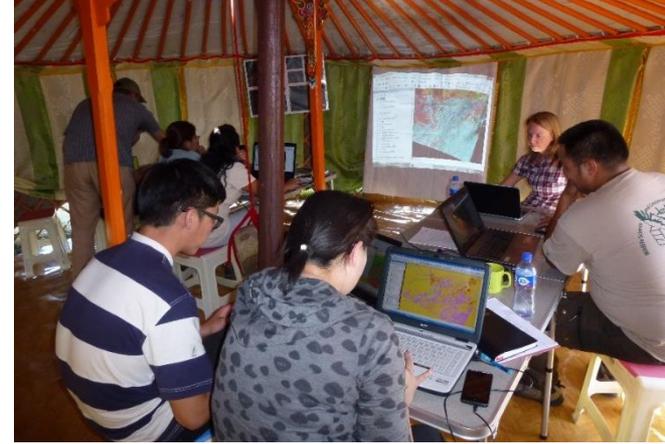
## B. Capacity building

- Mongolian White-naped Crane project trained about 20 young biologists, recent graduates, and undergraduate students in field survey techniques and basic data analysis
- A workshop entitled, “Endangered cranes and satellite imagery analysis: a workshop to build local knowledge and capacity in wildlife conservation and research in Mongolia” was organized in August 2015 in Ulaanbaatar and utilized the Khurkh and Khuiten Valleys as field training site.
- Two members from Mongolian project team, Nyambayar Batbayar and Sarangerel Ichinkhorloo, participated in the ‘Korean DMZ Joint Study’ and ‘Northeast Asia Young Conservation Leadership Programme” in January and May 2015, respectively.

# Capacity building



# Strengthening research capacity building and training



Crane capture and marking – every year since 2012

Birdwatching and identification training for park rangers -  
June 2013

Rangeland monitoring – July 2014

GIS and RS training – August 2015

International seminar on protected areas management – July  
2016

Eco-Hydrology training and workshop – August 2016

USFS Rangeland Management Internship – July – Sep 2016

## B. Public awareness

Locally, the project team raises public awareness on threatened crane species, their key habitats, and wetland conservation through public talks, presentations, meetings, publishing various articles, and radio and TV interviews as well.

Mongolian Crane Festival is being successfully organized since 2013.

Between 2014 and 2015, WSCC staff gave six presentations at six local schools and two EcoClubs on crane ecology and some results of the project

ICF's George Archibald gave a talk on cranes and wetland conservation for Mongolian Birdwatching Club August 2015

Mongolian biologist Iderbat Damba gave an interview on cranes and wetland issues to Mongolian National Television August 2015

Dr. Tseveenmyadag Natsagdorj gave a public talk on rare birds and cranes on Mongolian Central Radio in October 2015.

Four full length TV programs have been made and aired on Jiangxi province, Mongol TV, and National TV channels

# Crane festival of Mongolia



# International cooperation on conservation of white-naped cranes



Poyang Lake NR, China



US Forest Service, USA



Korea WaterBird Network, South Korea



ICF and Jiangxi TV, China

# International cooperation on conservation of white-naped cranes



Daursky Nature Reserve, Russia



Max Planck Institute, Germany

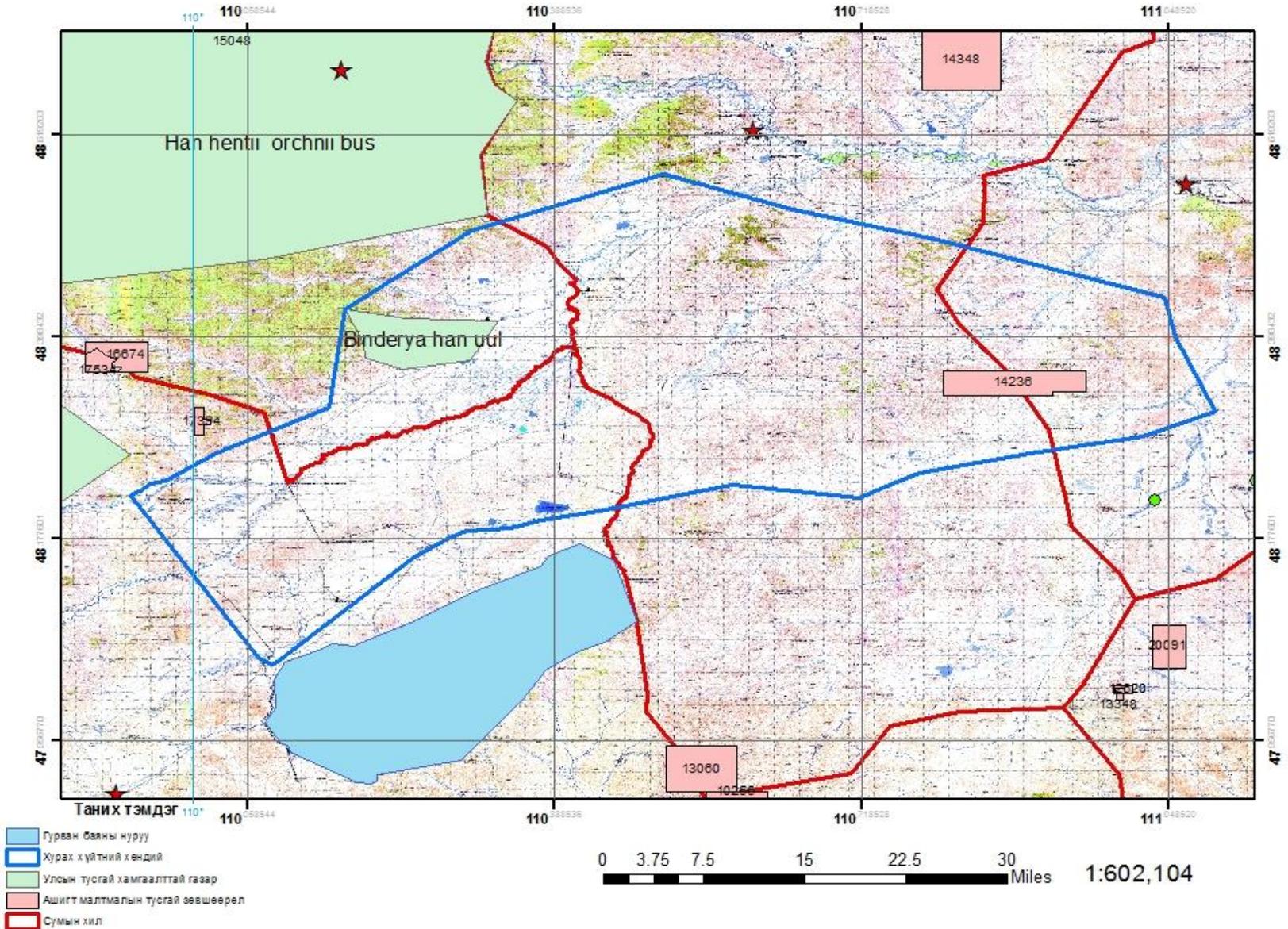


Ministry of Land and Environmental  
Protection, DPRK



UN NEASPEC

# Province level protected area was designated in May 2016



# Selected recommendations for future actions

1. Continue population monitoring at key nesting grounds at KKRV for long term monitoring
2. Support project in KKRV to elevate the protection status of the site to the national level
3. Start a migratory species connectivity project to secure the protection of key stopover and staging sites for white-naped cranes in China, DPRK, and ROK
4. Carry out a multi-national coordinated crane count in September before autumn migration starts involving people in Mongolia, Russia, and China
5. Develop basic guidelines for research, CEPA, and management guidelines for key stopover and staging sites (wintering sites already have good guidelines)
6. Training of young conservations and researchers in migratory crane conservation and research aspects

# International cooperation on conservation of white-naped cranes

It is very critical for all countries in the region to collaborate for white-naped crane conservation.



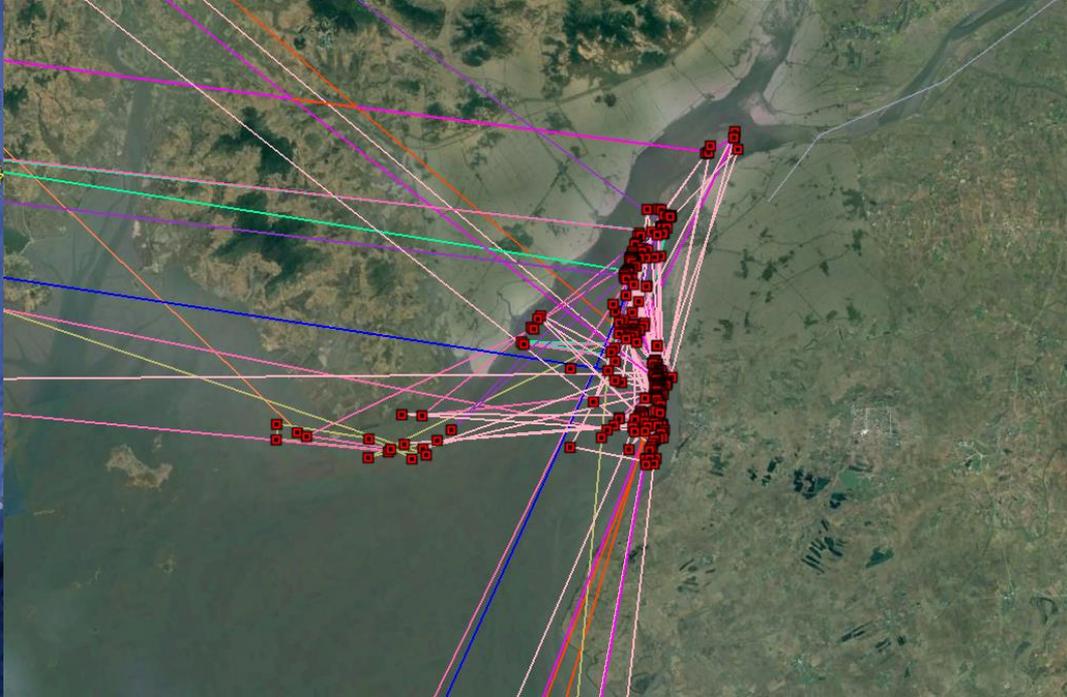
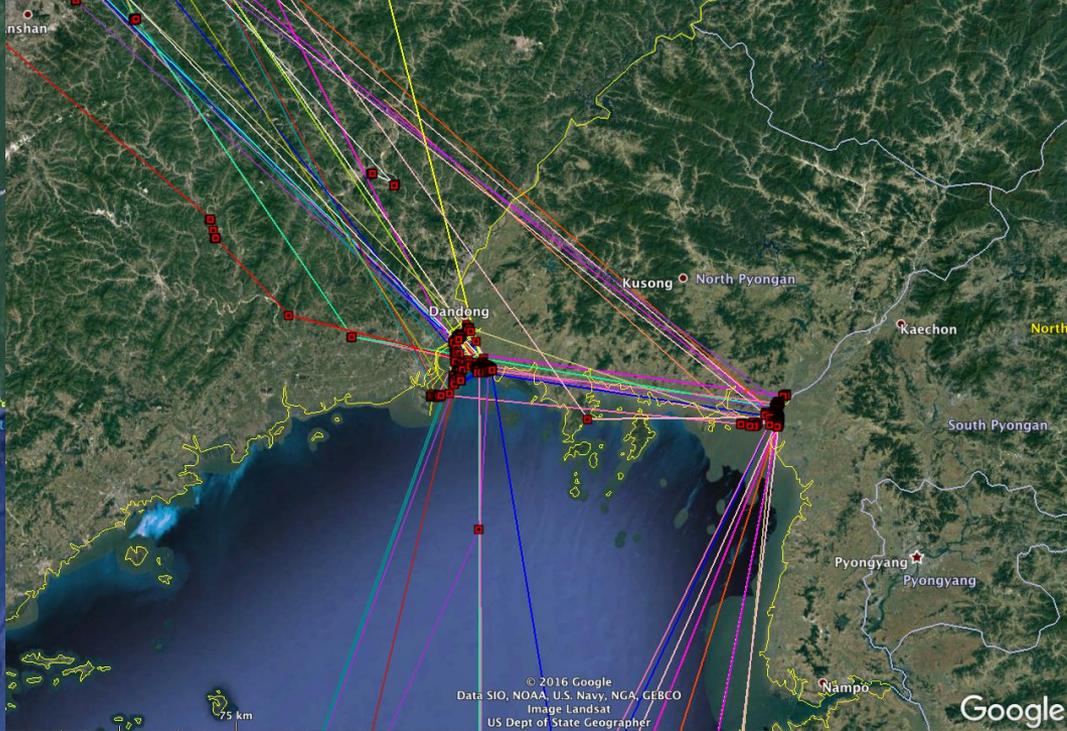
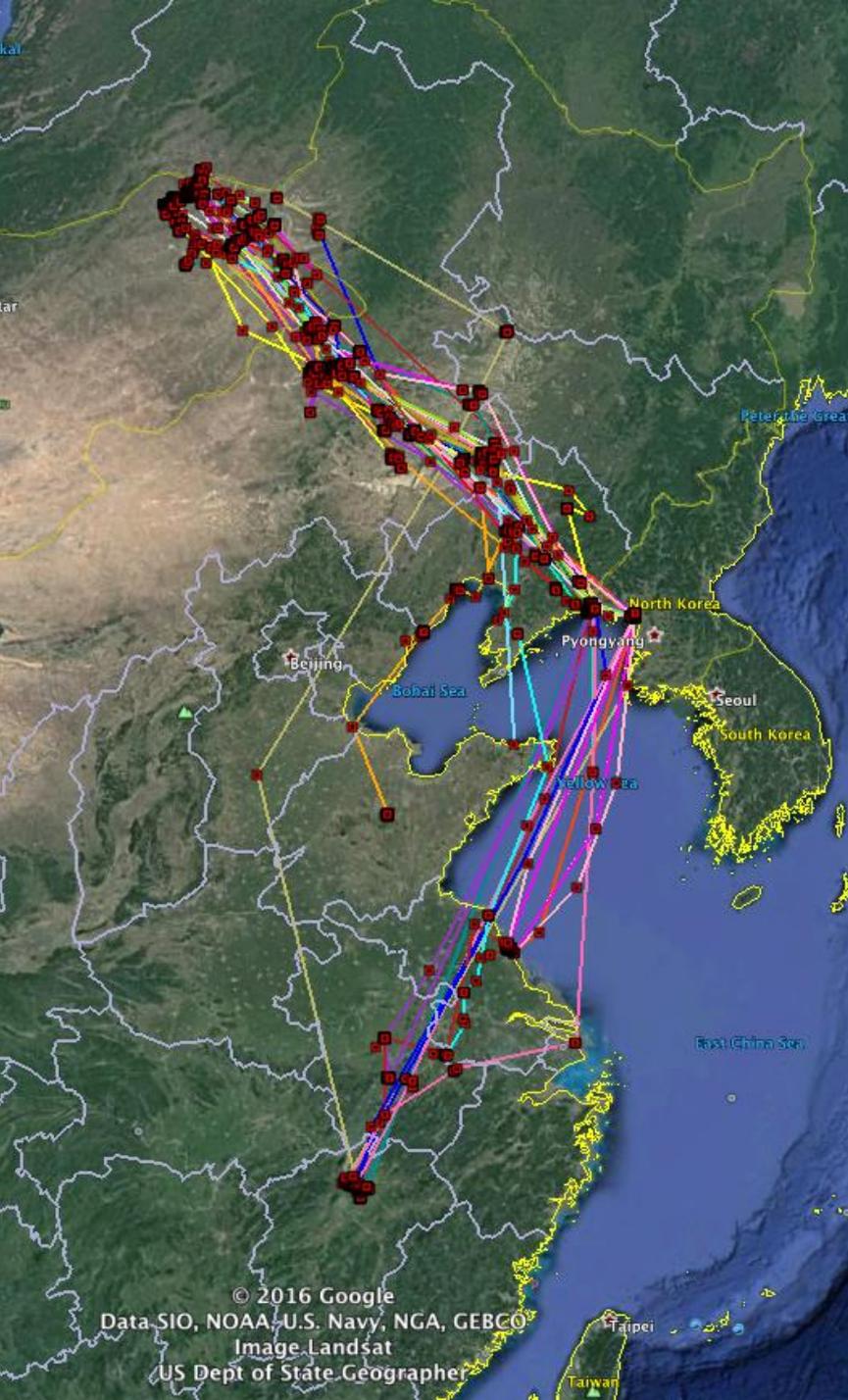
International workshop on WNC which was organized in Ulaanbaatar, August 2016

- Transboundary natural resource management
- Poverty reduction
- Rangeland management
- Protected area management
- Crane population monitoring
- Public awareness
- Wetland conservation



# Survey and training in DPRK, November 2016





# Acknowledgements

We are grateful for all students and volunteers participated in the field work and surveys in eastern Mongolia.

Especially, we are thankful for Amarkhuu Gungaa, Baatarkhuu Batmunkh, Iderbat Damba, Tuvshinjargal Erdenechimeg, Baatarsuren Baatar, Jugdernamjil Nergui, Sergelen and two drivers.

The Ministry of Environment, Green Development, and Tourism of Mongolia provided funding support to implement the project.

WWF Mongolia was instrumental to establish protection status at KKV

We appreciate the NEASPEC for providing support needed to organize scoping surveys and take part in the joint study at Daursky Nature Reserve in Russia.

Significant part of the funding was provided by the International Crane Foundation and US Forest Service.

We are grateful for our collaborators in China – BFU and Poyang Lake NR – for a successful cooperative work.

Thank you very much for your  
attention



*Discussion on the global status of white-naped crane, Kurkh Valley, August 2016*